



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference NG/21540A	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/GB2004/001344	International filing date (day/month/year) 29.03.2004	Priority date (day/month/year) 28.03.2003
International Patent Classification (IPC) or national classification and IPC E21B34/10, E21B21/10, E21B34/08		
Applicant SMITH INTERNATIONAL, INC. et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box-No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 28.10.2004	Date of completion of this report 10.03.2005	
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Garrido Garcia, M Telephone No. +31 70 340-4468 	

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-12 as originally filed

Claims, Numbers

1-18 as originally filed

Drawings, Sheets

1/6-6/6 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-4,6,12-17
Inventive step (IS)	Yes: Claims	
	No: Claims	5,7-11,18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

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Re Item V.

Reference is made to the following documents:

- D1: US-A-5 636 661
- D2: US-A-4 393 930
- D3: US-B1-6 209 663
- D4: US-A-4 291 722

Novelty

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

The document **D1** discloses (the references in parentheses applying to this document) a downhole tool comprising a body having a bore extending longitudinally therethrough, wherein the tool further comprises a one-way valve (204) for allowing a flow of fluid in a first direction (C) through the tool bore and preventing a flow of fluid in a second direction (D) through the tool bore, the second direction (D) being opposite to the first direction (C); means (214) for rendering the one-way valve (214) inoperable so as to be ineffective at preventing fluid flow (see column 7, lines 54 to 57); and means for selectively making the one-way valve operable so as to be effective at allowing fluid flow in said first direction (C) and preventing fluid flow in said second direction (D) (see column 7, lines 63 to 65).

Document D1 equally anticipates all the features of claims 2 to 4, 6, 12 and 13, **dependent** on claim 1; all the features of **independent** claim 14, and all the features of claims 15 to 17, **dependent** on claim 14. All those claims therefore are also considered not new.

Inventive step

Dependent claims 5, 7 to 11, and 18 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in

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respect of inventive step, see documents D2, D3 and D4 and the corresponding passages cited in the search report.

Clarity

It is not clear what claim or claims is claim 13 dependent on, as the feature "*the closure member*" does not appear in claim 9, or in any of claims 1 to 8. For the assesment of novelty, claim 13 has been deemed to be dependent on claim 12.

Other requirements

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

In order to facilitate the examination of the conformity of the amended application with the requirements of Article 34(2)(b) PCT, the applicant is requested to clearly identify the amendments carried out, no matter whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based (see also Rule 66.8(a) PCT).

If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.